

LOW COMPRESSION SCREW

ABSTRACT OF THE DISCLOSURE

5 A screw comprising a screw shaft having a thread spirally positioned about
the screw shaft so as to form a plurality of flights, said screw having a feeding
zone, a compression zone and a metering zone, and means in said screw for
providing a mass of material in a flight in the feeding zone that is substantially the
same as the mass of material in a flight in the metering zone, wherein said means
includes flights formed in the metering zone having a pitch and depth based upon
the volume of the material in a molten state and flights formed in the feeding zone
10 having a pitch and depth based upon the volume of the material in a bulk state.
This design results in a screw which has a balanced mass flow, and thus a constant
pressure gain along the screw without pressure peaks.

15

S:\Patent Documents\Eng. Polymers\AD-65xx\AD-6571\AD6571-E US Spec.doc

20

25